Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (currently amended) A ~~generic~~ host interface ~~for a data storage device~~ comprising:

a channel select bit encoder ~~to assert~~ that asserts to a media controller one or more channel select bits indicating one of a plurality of ~~or more~~ virtual channels through which the host interface will communicate over a data bus with the media controller;

a virtual channel controller ~~to establish a~~ coupled to the channel select bit encoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the ~~with a~~ media controller ~~of the data storage device based on the virtual channel indicated by the one or more channel select bits and perform transfer of data over the data bus; and~~

~~a communication controller to implement a communication protocol for communication with a host and transfer data to and from the media controller via the connection based on the communication with the host.~~

2. (currently amended) The host interface of claim 1, wherein ~~one~~ the connection is a peer-to-peer connection and the indicated virtual channel ~~of the one or more virtual channels~~ of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer data between the host interface and the media controller.

3. (currently amended) The host interface of claim 1, wherein ~~one~~ the connection is a peer-to-peer connection and the indicated virtual channel ~~of the one or more virtual channels~~ of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer control signals between the host interface and the media controller.

4. (currently amended) The host interface of claim 1, wherein ~~one~~ the connection is a peer-to-peer connection and the indicated virtual channel ~~of the one or more virtual channels~~ of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer side band information between the host interface and the media controller.

5. (currently amended) The host interface of claim [[1]] 23, wherein the communication controller transfers data to and from the media controller synchronous with a clock in the host controller.

6. (currently amended) The host interface of claim [[1]] 23, wherein the communication controller transfers data to and from the media controller based on a quadrature handshake model.

7. (currently amended) A data-storage-device media controller comprising:

a channel select bit decoder to decode that decodes one or more channel select bits received from a host interface indicating one of a plurality of or more virtual channels through which the host interface media-controller will communicate over a data bus with the host interface media controller;

a virtual channel controller to establish coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits with the host interface based on the virtual channel indicated by the one or more channel select bits and perform transfer of data over the data bus; and

a communication controller to transfer data to and from the host interface via the connection.

8. (currently amended) The media controller of claim 7, wherein one the connection is a peer-to-peer connection and the indicated virtual channel of the one or more virtual channels of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer data between the host interface and the media controller.

9. (currently amended) The media controller of claim 7, wherein one the connection is a peer-to-peer connection and the indicated virtual channel of the one or more virtual channels of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer control signals between the host interface and the media controller.

10. (currently amended) The media controller of claim 7, wherein one the connection is a peer-to-peer connection and the indicated virtual channel of the one or more virtual channels

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of the host interface and the corresponding virtual channel of the media controller are [[is]] used to establish [[a]] the peer-to-peer connection to transfer side band information between the host interface and the media controller.

11. (currently amended) The media controller of claim [[7]] 24, wherein the communication controller transfers data to and from the host interface synchronous with a clock in the host interface.

12. (currently amended) The media controller of claim [[7]] 24, wherein the communication controller transfers data to and from the host interface based on a quadrature handshake model.

13. (currently amended) The media controller of claim 7, wherein the connection with the host interface is a peer-to-peer connection and the media controller limits access to a storage medium of [[the]] a data storage device through the peer-to-peer connection.

14. (currently amended) The media controller of claim 13, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the one or more virtual channels of the media controller, the registers indicating a range of addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

15. (currently amended) A data storage device comprising:
a host interface comprising a channel select bit encoder that asserts to assert one or more channel select bits indicating one of a plurality of or more virtual channels through which the host interface will communicate over a data bus[[,]] a virtual channel controller to establish a connection based on the virtual channel indicated by the one or more channel select bits and perform transfer of data over the data bus, and a communication controller to implement a communication protocol for communication with a host and transfer data via the connection based on the communication with the host; and
a media controller comprising a channel select bit decoder to decode that decodes the one or more channel select bits received from the host interface[[,]] and a virtual channel controller coupled to the channel select bit decoder to establish that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits with the host interface based on the virtual channel indicated by the

~~one or more channel select bits and perform transfer of data over the data bus, and a communication controller to transfer data to and from the host interface via the connection.~~

16. (currently amended) The data storage device of claim 15, wherein ~~one~~ <u>the</u> <u>connection is a peer-to-peer connection and the indicated</u> virtual channel ~~of the one or more virtual channels~~ <u>of the host interface and the corresponding virtual channel of the media</u> <u>controller are</u> [[is]] used to establish <u>the</u> [[a]] peer-to-peer connection to transfer data between the host interface and the media controller.

17. (currently amended) The data storage device of claim 15, wherein ~~one~~ <u>the</u> <u>connection is a peer-to-peer connection and the indicated</u> virtual channel ~~of the one or more virtual channels~~ <u>of the host interface and the corresponding virtual channel of the media</u> <u>controller are</u> [[is]] used to establish [[a]] <u>the</u> peer-to-peer connection to transfer control signals between the host interface and the media controller.

18. (currently amended) The data storage device of claim 15, wherein ~~one~~ <u>the</u> <u>connection is a peer-to-peer connection and the indicated</u> virtual channel ~~of the one or more virtual channels~~ <u>of the host interface and the corresponding virtual channel of the media</u> <u>controller are</u> [[is]] used to establish [[a]] <u>the</u> peer-to-peer connection to transfer side band information between the host interface and the media controller.

19. (currently amended) The data storage device of claim [[15]] <u>25</u>, wherein the communication controller of the host interface transfers data to and from the media controller synchronous with a clock in the host controller.

20. (currently amended) The data storage device of claim [[15]] <u>25</u>, wherein the communication controller of the host interface transfers data to and from the media controller based on a quadrature handshake model.

21. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the media controller limits access to a storage medium of the data storage device through the peer-to-peer connection.

22. (currently amended) The data storage device of claim 21, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the ~~one or more~~ virtual channels <u>of the media controller</u>, the registers indicating a range of

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addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

23. (new) The host interface of claim 1 further comprising:

a communication controller that transfers data between the host interface and the media controller via address-less transfer.

24. (new) The media controller of claim 7 further comprising:

a communication controller that transfers data between the host interface and the media controller via address-less transfer.

25. (new) The data storage device of claim 15 wherein the host interface further comprises:

a communication controller that transfers data between the host interface and the media controller via address-less transfer.